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**Title of Application:** METHOD, SYSTEM, COMPUTER PROGRAM PRODUCT, AND ARTICLE OF MANUFACTURE FOR DOWNLOADING A REMOTE COMPUTER PROGRAM ACCORDING TO A STORED CONFIGURATION

**Transmitted with the patent application are the following:**

25 Page(s) Specification, Claims and Abstract  
4 Page(s) Formal drawings  
3 Page(s) Declaration and Power of Attorney  
2 Page(s) Assignment of the Invention to International Business Machines Corporation (incl. Rec. Cover Sheet)  
2 Page(s) Information Disclosure Statement (IDS/PTO 1449) (copies of citations not included in number of pages)  
X Copies of IDS citations  
X Return Receipt Postcard (MPEP 503).

**Fee Calculation:**

	Claims		Extra	Rate	Fees
<b>Basic Fee</b>					<b>\$710.00</b>
<b>Total Claims</b>	<b>18</b>	<b>-20 =</b>	<b>0</b>	<b>x \$18.00</b>	
<b>Independent Claims</b>	<b>3</b>	<b>-3 =</b>	<b>0</b>	<b>x \$80.00</b>	
<b>Multiple Dependent Claims</b>				<b>+\$270.00</b>	
					<b>TOTAL</b> <b>\$710.00</b>

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**EXPRESS MAIL CERTIFICATE**

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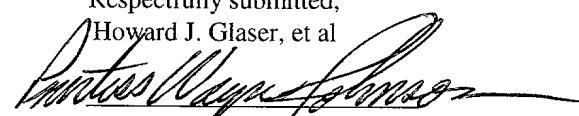
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## **S P E C I F I C A T I O N**

IBM Docket No. STL920000091US1

**TO ALL WHOM IT MAY CONCERN:**

BE IT KNOWN that We, Howard J. Glaser of San Jose, California and citizen of the United States, Laurence E. England of Morgan Hill, California and citizen of the United States, Rebecca Lau Poole of San Jose, California and citizen of the United States, and Chenhong Xia of San Jose, California and resident of the United States, have invented new and useful improvements in

### **METHOD, SYSTEM, COMPUTER PROGRAM PRODUCT, AND ARTICLE OF MANUFACTURE FOR DOWNLOADING A REMOTE COMPUTER PROGRAM ACCORDING TO A STORED CONFIGURATION**

of which the following is a specification:

1  
2  
3       **METHOD, SYSTEM, COMPUTER PROGRAM PRODUCT, AND ARTICLE OF**  
4       **MANUFACTURE FOR DOWNLOADING A REMOTE COMPUTER PROGRAM**  
5       **ACCORDING TO A STORED CONFIGURATION**  
6  
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8

9       **CROSS-REFERENCE TO RELATED APPLICATIONS**  
10

11       Application Serial Number \_\_\_\_\_, filed concurrently herewith on October 12,  
12 2000 for METHOD, SYSTEM, COMPUTER PROGRAM PRODUCT, AND ARTICLE OF  
13 MANUFACTURE FOR INSTALLATION AND CONFIGURATION OF A COMPUTER  
14 PROGRAM ACCORDING TO A STORED CONFIGURATION (IBM Docket  
15 STL920000062), currently co-pending, and assigned to the same assignee as the present  
16 invention; and

17       Application Serial Number \_\_\_\_\_, filed concurrently herewith on October 12,  
18 2000 for METHOD, SYSTEM, COMPUTER PROGRAM PRODUCT, AND ARTICLE OF  
19 MANUFACTURE FOR UPDATING A COMPUTER PROGRAM ACCORDING TO A  
20 STORED CONFIGURATION (IBM Docket STL920000092), currently co-pending, and  
21 assigned to the same assignee as the present invention.

22       The foregoing co-pending applications are incorporated herein by reference.  
23  
24

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## BACKGROUND OF THE INVENTION

## 1. Field of the Invention

The present invention relates in general to computer programs, and more particularly to a downloading of a computer program.

## 2. Description of the Related Art

Customers and providers may have a number of requirements in installing or deploying an application program.

Customers may prefer to remotely install application program clients from a central server(s) in order to increase both installation productivity and maintenance productivity. Thin clients may be preferred as thin clients generally require less workstation customization, perhaps as little as a browser with the appropriate option settings and plugins. Preferably, users should be able to move between different workstations, and still be able to access their tools and data, another potential advantage of a thin client. A customer may prefer to control which application programs and which versions of the application programs are available to a particular user. In addition to controlling the application programs, a customer may wish to control access to resources and assets based upon a user's responsibilities and roles in an organization. Alternatively, the customer may wish to control and filter project work views based on the user's responsibilities and roles. In addition to such central control, the customer may want an inventory of the application programs (including versions) installed and used on a workstation or a group of workstations without the need to go to each user workstation.

1 An application program provider may also have a number of similar requirements in  
2 installing or deploying an application program. The provider may also want for licensing  
3 purposes the inventory of the application programs (including versions) installed and used on a  
4 workstation or a group of workstations without the need to go to each user workstation. To  
5 satisfy a customer's specific individual requirements, the provider would prefer a mechanism  
6 for configuring the application program to support a customer solution which may be tailored  
7 by the customer to suit the customers needs, such as role-based views.

8

9 Conventional systems and methods have failed to provide all of the above advantages.  
10 Thus, there is a clearly felt need for a method, system, article of manufacture, and computer  
11 program product for providing application program downloading with these advantages.

## **SUMMARY OF THE INVENTION**

The present invention comprises a method, system, article of manufacture, and a computer program product for downloading an application program. A configuration of the application program corresponding to a particular user of the local application is defined and stored on a remote server. In response to the user requesting the application program, a session is initiated between the local data processing system and the remote data processing system, and the user is authenticated. Responsive to the user authentication, data is downloaded from the remote server to the local data processing system according to the stored configuration. This stored configuration also may be encrypted and stored in a manifest file which is decrypted to produce a decrypted configuration in response to the user authentication. Data may then be downloaded from the remote data processing system to the local data processing system according to the decrypted configuration. The application program may be constructed pursuant to the configuration file or the decrypted configuration file.

One aspect of a preferred embodiment of the present invention defines a configuration of an application program corresponding to a particular user of the application program.

Another aspect of a preferred embodiment of the present invention stores the configuration on a remote server executing on a remote data processing system.

Another aspect of a preferred embodiment of the present invention initiates a session between the local data processing system and the remote data processing system in response to the user requesting the application program.

Another aspect of a preferred embodiment of the present invention authenticates the user in response to the user request.

Another aspect of a preferred embodiment of the present invention determines that the

1 stored configuration corresponds to the requesting user.

2

3 Another aspect of a preferred embodiment of the present invention downloads data  
4 from the remote data processing system to the local data processing system according to the  
5 stored configuration.

6

7 Another aspect of a preferred embodiment of the present invention encrypts the stored  
8 configuration into a manifest file.

9

10 Another aspect of a preferred embodiment of the present invention downloads the  
11 manifest file from the remote data processing system to the local data processing system.

12

13 Another aspect of a preferred embodiment of the present invention decrypts the  
14 manifest file in response to the user authentication.

15

16 Another aspect of a preferred embodiment of the present invention builds the  
17 application program pursuant to the configuration decrypted from the manifest file.

18

19 Another aspect of a preferred embodiment of the present invention authenticates the  
20 user in response to the user requesting a build of the application program.

21

22 The present invention has the advantage of providing improved downloading of a  
23 computer program.

24

25 The present invention has the further advantage of providing a download of an  
26 application program client from a central server(s) in order to increase installation productivity  
27 and maintenance productivity.

28

29 The present invention has the further advantage of providing control over which

1 application programs and which versions of the application programs are downloadable to a  
2 particular user.

3

4 The present invention has the further advantage of providing an inventory of the  
5 application programs (including versions) downloaded to a workstation or a group of  
6 workstations without the need to go to each user workstation.

7

8 The present invention has the further advantage of providing for licensing purposes the  
9 inventory of the application programs (including versions) downloaded to a workstation or a  
10 group of workstations without the need to go to each user workstation.

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## **BRIEF DESCRIPTION OF THE DRAWINGS**

For a more complete understanding of the present invention and the advantages thereof, reference is now made to the Description of the Preferred Embodiment in conjunction with the attached Drawings, in which:

**Figure 1** is a block diagram of a distributed computer system used in performing the method of the present invention, forming part of the apparatus of the present invention, and which may use the computer program product and article of manufacture comprising a computer-readable storage medium having a computer program embodied in said medium which may cause the computer system to practice the present invention;

**Figure 2** is a block diagram of an application server and a user workstation preferred in carrying out a preferred embodiment of the present invention; and

**Figure 3** and **Figure 4** are flowcharts of method steps preferred in carrying out a preferred embodiment of the present invention.

## DESCRIPTION OF THE PREFERRED EMBODIMENT

An embodiment of the invention is now described with reference to the figures where like reference numbers indicate identical or functionally similar elements. Also in the figures, the left most digit of each reference number corresponds to the figure in which the reference number is first used. While specific configurations and arrangements are discussed, it should be understood that this is done for illustrative purposes only. A person skilled in the relevant art will recognize that other configurations and arrangements can be used without departing from the spirit and scope of the invention. It will be apparent to a person skilled in the relevant art that this invention can also be employed in a variety of other devices and applications.

With reference now to the figures, and in particular with reference to **Fig. 1**, there is depicted a pictorial representation of a distributed computer system **8** which may be utilized to implement the method of, system for, article of manufacture, and computer program product of the present invention. As may be seen, distributed computer system **8** may include a plurality of networks **10** and **32**, which may be Local Area Networks (LAN), intranet networks, or internet networks, each of which preferably includes a plurality of individual computers **12** and **30**, respectively. Of course, those skilled in the art will appreciate that a plurality of Intelligent Work Stations (IWS) coupled to a host processor may be utilized for each such network.

As is common in such data processing systems, each individual computer may be coupled to a storage device **14** and/or a printer/output device **16**. One or more such storage devices **14** may be utilized, in accordance with the present invention, to store the various computer programs which may be accessed and executed by a user within the distributed computer system **8**, in accordance with the present invention. In a manner well known in the prior art, each such computer program may be stored within a storage device **14**.

Still referring to **Fig. 1**, it may be seen that distributed computer system **8** may also include multiple mainframe computers, such as mainframe computer **18**, which may be

1 preferably coupled to Local Area Network **10** by means of communication link **22**. Mainframe  
2 computer **18** may also be coupled to a storage device **20** which may serve as remote storage for  
3 Local Area Network **10** which may be coupled via communications controller **26** and  
4 communications link **34** to a gateway server **28**. Gateway server **28** is preferably an individual  
5 computer or Intelligent Work Station which serves to link Local Area Network **32** to Local  
6 Area Network **10**.

7

8 As discussed above with respect to Local Area Network **32** and Local Area Network **10**,  
9 a plurality of server computer programs may be stored within storage device **20** and executed  
10 by mainframe computer **18**. Similarly, a plurality of client computer programs may be stored  
11 within storage devices **14** and executed by individual computers **12** such that distributed  
12 client/server computer programs are provided. Of course, those skilled in the art will  
13 appreciate that the mainframe computer **18** may be located a great geographical distance from  
14 Local Area Network **10**, and similarly, Local Area Network **10** may be located a substantial  
15 distance from Local Area Network **32**. That is, Local Area Network **32** may be located in  
16 California while Local Area Network **10** may be located within Texas and mainframe computer  
17 **18** may be located in New York.

18

19 As will be appreciated upon reference to the foregoing, it is desirable for a user of a  
20 workstation **12** to be able to remotely install an application program from server **18**. A  
21 configuration of the application program corresponding to this particular user of the application  
22 program is defined and stored on a remote storage **20** of the remote server **18**. In response to a  
23 user request communicated from the user workstation **12** to the server **18** via LAN **10** and  
24 communications link **22**, the server **18** determines that the configuration stored on storage **20**  
25 corresponds to the requesting user. Server **18** authenticates the user, and after such  
26 authentication, data is downloaded to the workstation **12** from the remote server **18** according  
27 to the stored configuration. This stored configuration is also encrypted and stored in a manifest  
28 file which is also downloaded. Responsive to the user authentication, the manifest file is  
29 decrypted, and the application program is constructed, configured, and installed on workstation

1       **12** pursuant to the configuration decrypted from the manifest file. The user may also move  
2       from a first workstation **12** on which the application program is installed to a different second  
3       workstation **12** on LAN **10** and still be able to access the user's tools and data which may be  
4       downloaded and installed on the second workstation **12** in a similar fashion to the download  
5       and installation on the first workstation **12**. Using the user configurations and authentications  
6       stored on storage **20** and the server **18**, a customer may control the application programs, the  
7       versions of these application programs, and resources that are available to the particular user.  
8

9               The customer may also inventory the application programs (including versions)  
10       installed and used on a workstation **12** or a group of workstations **12** on LAN **10** without the  
11       need to go to each user workstation. An application program provider may also want for  
12       licensing purposes such an inventory which may be produced by customer's server **18** or the  
13       provider's server **26**.

16               Referring now to **Figure 2**, a block diagram of a preferred embodiment of the present  
17       invention is illustrated. A file known as a manifest file or manifest **244** provides a description  
18       as to which plugins, configurations, and other resources should be loaded when an application  
19       program, such as an Integrated Development Environment (IDE), is initialized. Although the  
20       preferred embodiment is presented in the context of an IDE, those skilled in the art will  
21       recognize that the invention may be practiced with other types of application programs. The  
22       preferred embodiment uses this manifest to provide a mechanism for plugging in tools or  
23       components to provide a customized application program with the appropriate viewers, editors,  
24       browsers, and other resources to support the user's needs. For example, a customized IDE  
25       may be provided with the appropriate viewers, editors, and browsers to support a specific  
26       developer's needs. Furthermore, the preferred embodiment allows remote customization and  
27       configuration of the application program for an individual user based on the user's role and  
28       responsibility in an organization.

1        The preferred embodiment of the present invention comprises an application server  
2        **202**, which may be behind a web server, that is used to define users **204**, **206**, and **208** in a user  
3        table **210** and to define the users' application program configurations (**214**, **216**, and **218**) in a  
4        user IDE configuration table **220**. This configuration may include plugins **222** to be  
5        downloaded , user authorizations for each user **224**, templates for builds **226** (pre packaged  
6        site JCL), location/configuration of site servers **228**, other information **230** such as the location  
7        and configuration of system input/output (I/O), and any site specific documentation **232** which  
8        may be shown in a browser or plugin.

9  
10       A security system **234**, such as a certificate or simple a logon dialog, may be used by a  
11       user to initiate a session **236** with the server **202**. Upon authentication of the user by the  
12       security system **234**, a table lookup of the user table **210** is performed and plugins **222**,  
13       authorizations **224**, templates **226**, server information **228**, and documentation **232** are  
14       aggregated into the user's components **238** which are downloaded via the download **240** to the  
15       user's workstation **242**. In addition, a manifest **244** is created with this configuration  
16       information. This manifest **244** is encrypted and requires authentication from a security system  
17       **246** on the workstation **242** to be decrypted and used to build **248** an application program **250**.

18  
19       After the download **240** to the user's workstation **242**, the user through a local logon in  
20       the security system **246** invokes the decryption and use of the manifest **244** to build **248** the  
21       user's personalized application program **250**. Meanwhile a request may be sent, preferably  
22       unknown to the user, to the server **202** to check a component configuration table **252**  
23       maintained in the application server **202** to determine if any items have been updated.  
24       Alternatively, a request may be sent to the server **202** to record in a components inventory **254**  
25       which tools are being used by the user.

26  
27       Referring now to **Figures 3 and 4**, the flowcharts **300** and **400** illustrate the operations  
28       preferred in carrying out the preferred embodiment of the present invention. In the flowcharts,  
29       the graphical conventions of a diamond for a test or decision and a rectangle for a process or

1 function are used. These conventions are well understood by those skilled in the art, and the  
2 flowcharts are sufficient to enable one of ordinary skill to write code in any suitable computer  
3 programming language.

4

5 After the start **305** of the process **300**, process block **310** defines a configuration of the  
6 application corresponding to a particular user **206** of the application, such as user 2, and  
7 process block **315** then stores the configuration **216** on a remote server **202** executing on a  
8 remote data processing system **18**. Alternatively, the configuration **216** may be stored on local  
9 data processing system **242**. Thereafter, process block **320** may initiate a session between the  
10 local data processing system **242** and the application server **202** on remote data processing  
11 system **18** in response to the user **206** requesting the application. Responsive to this user  
12 request, process block **325** authenticates the user **206**, and process block **330** then determines  
13 that the stored configuration **216** corresponds to the requesting user **206**. Process block **335**  
14 then downloads data **240** from the remote data processing system **202** to the local data  
15 processing system **242** according to the stored configuration **216**. Alternatively, process block  
16 **335** may access the data **240** from the local data processing system **242** or from another  
17 resource within the distributed computer system **8** according to the stored configuration **216**.  
18 Thereafter, processing continues to decision block **450** on **Figure 4**. This processing path is  
19 illustrated by flowchart connectors **A**, **340** on **Figure 3** and **445** on **Figure 4**. Process block  
20 **450** encrypts the stored configuration **216** into a manifest file **244** which is then downloaded by  
21 process block **455** from the remote data processing system **202** to the local data processing  
22 system **242**. Alternatively, process block **450** may encrypt the stored configuration **216** into a  
23 manifest file **244** which is then stored on the local data processing system **242**. After the  
24 download **240** of the manifest file **244** and the components **238** to the user workstation **242**, the  
25 user **206** may request a build **248** of the downloaded components **238** pursuant to the  
26 configuration in the manifest file **244**. Responsive to such a user request, the user is  
27 authenticated by process block **460**, and if the user **206** is authenticated, then process block **465**  
28 decrypts the manifest file **244**. Thereafter, process block **470** builds, installs, and configures  
29 the application program **250** pursuant to the configuration decrypted from the manifest file **244**.

1       The process then ends at process block **475**.

2

3           In an alternative embodiment of the present invention, an application program is  
4       updated for execution on the data processing system. In this alternative embodiment, process  
5       block **330** also determines if any items described in the configuration have been updated. If an  
6       item has been updated, then process block **335** retrieves the updated item, and process block  
7       **470** builds the application program with the updated item.

8

9           In still another alternative embodiment of the present invention, an application program  
10       is updated for execution on the data processing system based upon determining if any items  
11       described in the decrypted configuration have been updated. In this alternative embodiment,  
12       process block **465** also determines if any items described in the decrypted configuration have  
13       been updated. If an item has been updated, then process block **470** retrieves the updated item  
14       and builds the application program with the updated item.

15

16           Using the foregoing specification, the invention may be implemented using standard  
17       programming and/or engineering techniques using computer programming software, firmware,  
18       hardware or any combination or sub-combination thereof. Any such resulting program(s),  
19       having computer readable program code means, may be embodied within one or more  
20       computer usable media such as fixed (hard) drives, disk, diskettes, optical disks, magnetic tape,  
21       semiconductor memories such as Read-Only Memory (ROM), Programmable Read-Only  
22       Memory (PROM), etc., or any memory or transmitting device, thereby making a computer  
23       program product, i.e., an article of manufacture, according to the invention. The article of  
24       manufacture containing the computer programming code may be made and/or used by  
25       executing the code directly or indirectly from one medium, by copying the code from one  
26       medium to another medium, or by transmitting the code over a network. An apparatus for  
27       making, using, or selling the invention may be one or more processing systems including, but  
28       not limited to, central processing unit (CPU), memory, storage devices, communication links,  
29       communication devices, servers, input/output (I/O) devices, or any sub-components or

1 individual parts of one or more processing systems, including software, firmware, hardware or  
2 any combination or sub-combination thereof, which embody the invention as set forth in the  
3 claims. User input may be received from the keyboard, mouse, pen, voice, touch screen, or any  
4 other means by which a human can input data to a computer, including through other programs  
5 such as application programs, databases, data sets, or files.

6

7 One skilled in the art of computer science will easily be able to combine the software  
8 created as described with appropriate general purpose or special purpose computer hardware to  
9 create a computer system and/or computer sub-components embodying the invention and to  
10 create a computer system and/or computer sub-components for carrying out the method of the  
11 invention. Although the present invention has been particularly shown and described with  
12 reference to a preferred embodiment, it should be apparent that modifications and adaptations  
13 to that embodiment may occur to one skilled in the art without departing from the spirit or  
14 scope of the present invention as set forth in the following claims.

## CLAIMS

We claim:

1        1. An article of manufacture for use in a data processing system for downloading an  
2 application program from a remote data processing system for execution on a local data  
3 processing system, said article of manufacture comprising a computer-readable storage medium  
4 having a computer program embodied in said medium which causes the data processing system  
5 to execute the method steps comprising:

6                        defining and storing a configuration of the application program corresponding to  
7 a particular user of the application program;

8                        initiating a session between the local data processing system and the remote data  
9 processing system in response to the user requesting the application program;

10                       authenticating the user in response to the user requesting the application  
11 program; and

12                       responsive to the user authentication, downloading data from the remote data  
13 processing system to the local data processing system according to the stored  
14 configuration.

1       2. The article of manufacture of claim 1 wherein the data processing system is a local data  
2       processing system, and wherein the computer program embodied in said medium causes the  
3       data processing system to execute the additional method steps comprising:

4  
5            encrypting and storing the configuration in a manifest file;

6            decrypting the manifest file to produce a decrypted configuration in response to  
7       the user authentication; and

8            downloading data from the remote data processing system to the local data  
9       processing system according to the decrypted configuration.

1       3. The article of manufacture of claim 2 wherein the computer program embodied in said  
2       medium causes the data processing system to execute the additional method steps comprising:

3            encrypting and storing the configuration in a manifest file stored on the remote  
4       data processing system;

5            downloading the manifest file from the remote data processing system to the  
6       local data processing system;

7            decrypting the downloaded manifest file to produce a downloaded configuration  
8       in response to the user authentication; and

9            downloading data from the remote data processing system to the local data  
10      processing system according to the downloaded configuration.

1       4. The article of manufacture of claim 1 wherein the computer program embodied in said  
2 medium causes the data processing system to execute the additional method step comprising:  
3                   building the application program pursuant to the configuration decrypted from  
4                   the manifest file responsive to the second authentication.

1       5. The article of manufacture of claim 4 wherein the computer program embodied in said  
2 medium causes the data processing system to execute the additional method steps comprising:

3                   authenticating the user in a second authentication responsive to the user  
4                   requesting a build of the application program;

5                   decrypting the manifest file responsive to the second authentication; and  
6                   building the application program pursuant to the configuration decrypted from  
7                   the manifest file responsive to the second authentication.

1       6. The article of manufacture of claim 1 wherein the configuration comprises data  
2 describing the user, the user's application program configuration, and resources for which the  
3 user is authorized.

1       7.     A method of downloading an application program from a remote data processing  
2     system for execution on a local data processing system, said method comprising the steps of:

4                 defining and storing a configuration of the application program corresponding to  
5     a particular user of the application program;

6                 initiating a session between the local data processing system and the remote data  
7     processing system in response to the user requesting the application program;

8                 authenticating the user in response to the user requesting the application  
9     program; and

10                 responsive to the user authentication, downloading data from the remote data  
11     processing system to the local data processing system according to the stored  
12     configuration.

1       8.     The method of claim 7 wherein the data processing system is a local data processing  
2     system, and wherein said method further comprises the steps of:

3                 encrypting and storing the configuration in a manifest file;

4                 decrypting the manifest file to produce a decrypted configuration in response to  
5     the user authentication; and

6                 downloading data from the remote data processing system to the local data  
7     processing system according to the decrypted configuration.

1        9. The method of claim 8 further comprising the steps of:

2                encrypting and storing the configuration in a manifest file stored on the remote  
3                data processing system;

4                downloading the manifest file from the remote data processing system to the  
5                local data processing system;

6                decrypting the downloaded manifest file to produce a downloaded configuration  
7                in response to the user authentication; and

8                downloading data from the remote data processing system to the local data  
9                processing system according to the downloaded configuration.

1        10. The method of claim 7 further comprising the step of:

2                building the application program pursuant to the configuration decrypted from  
3                the manifest file responsive to the second authentication.

1        11. The method of claim 10 further comprising the steps of:

2                authenticating the user in a second authentication responsive to the user  
3                requesting a build of the application program;

4                decrypting the manifest file responsive to the second authentication; and

5                building the application program pursuant to the configuration decrypted from  
6                the manifest file responsive to the second authentication.

1       12. The method of claim 7 wherein the configuration comprises data describing the user,  
2       the user's application program configuration, and resources for which the user is authorized.

1       13. A computer system for use in a data processing system for downloading an application  
2       program from a remote data processing system for execution on a local data processing system,  
3       said computer system comprising:

5                    a stored configuration of the application program corresponding to a particular  
6       user of the application program;

7                    a session between the local data processing system and the remote data  
8       processing system in response to the user requesting the application program;

9                    an authentication of the user in response to the user requesting the application  
10      program; and

11                   a downloader, responsive to the user authentication, for downloading data from  
12      the remote data processing system to the local data processing system according to the  
13      stored configuration.

1       14. The computer system of claim 13 further comprising:

2                    a manifest file comprising an encrypted configuration;

3                    a decryptor for decrypting the manifest file in response to the user  
4       authentication; and

5                    a downloader for downloading data from the remote data processing system to  
6       the local data processing system according to the stored configuration.

1 15. The computer system of claim 14 further comprising:

2 a manifest file comprising an encrypted configuration stored on the remote data  
3 processing system;

4 a downloader for downloading the manifest file from the remote data processing  
5 system to the local data processing system;

6 a decryptor for decrypting the manifest file in response to the user authentication  
7 to produce a downloaded configuration; and

8 a downloader, responsive to the user authentication, for downloading data from  
9 the remote data processing system to the local data processing system according to the  
10 downloaded configuration.

1 16. The computer system of claim 13 further comprising:

2 an application builder for building the application program pursuant to the  
3 configuration decrypted from the manifest file responsive to the second authentication.

1       17. The computer system of claim 16 further comprising:

2                   a second authentication responsive to the user requesting a build of the

3                   application program;

4                   a decryptor for decrypting the manifest file responsive to the second

5                   authentication; and

6                   an application builder for building the application program pursuant to the

7                   configuration decrypted from the manifest file responsive to the second authentication.

1       18. The computer system of claim 13 wherein the configuration comprises data describing

2           the user, the user's application program configuration, and resources for which the user is

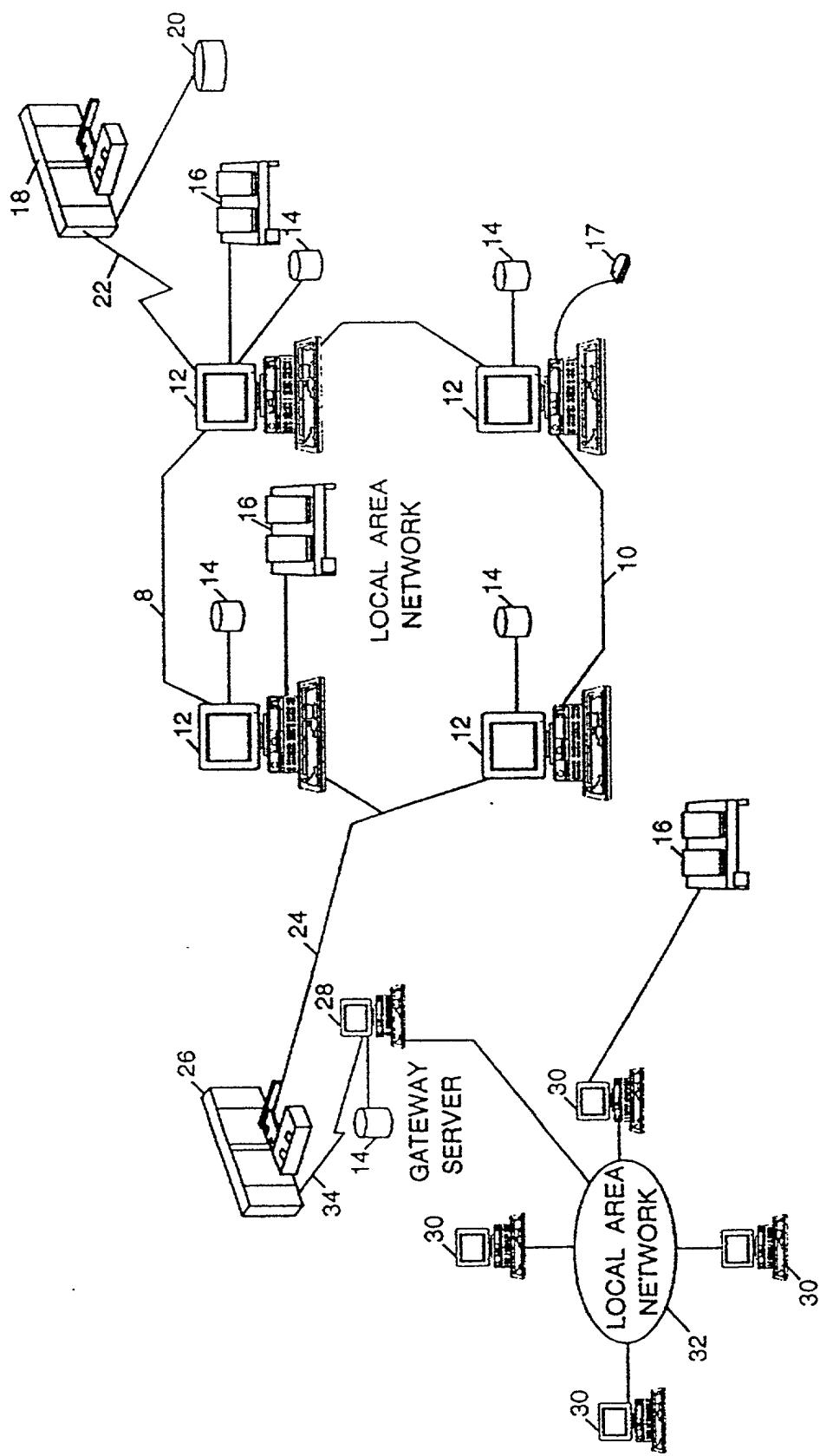
3           authorized.

## ABSTRACT

**METHOD, SYSTEM, COMPUTER PROGRAM PRODUCT, AND ARTICLE OF  
MANUFACTURE FOR DOWNLOADING A REMOTE COMPUTER PROGRAM  
ACCORDING TO A STORED CONFIGURATION**

A configuration of an application program corresponding to a particular user of the local application is defined and stored on a remote server. In response to the user requesting the application program, a session is initiated between the local data processing system and the remote data processing system, and the user is authenticated. Responsive to the user authentication, data is downloaded from the remote server to the local data processing system according to the stored configuration. This stored configuration may be encrypted and stored in a manifest file which is decrypted to produce a decrypted configuration in response to the user authentication, and data may be downloaded from the remote data processing system to the local data processing system according to the decrypted configuration. The application program may be constructed pursuant to the configuration file or the decrypted configuration file.

FIG. 1



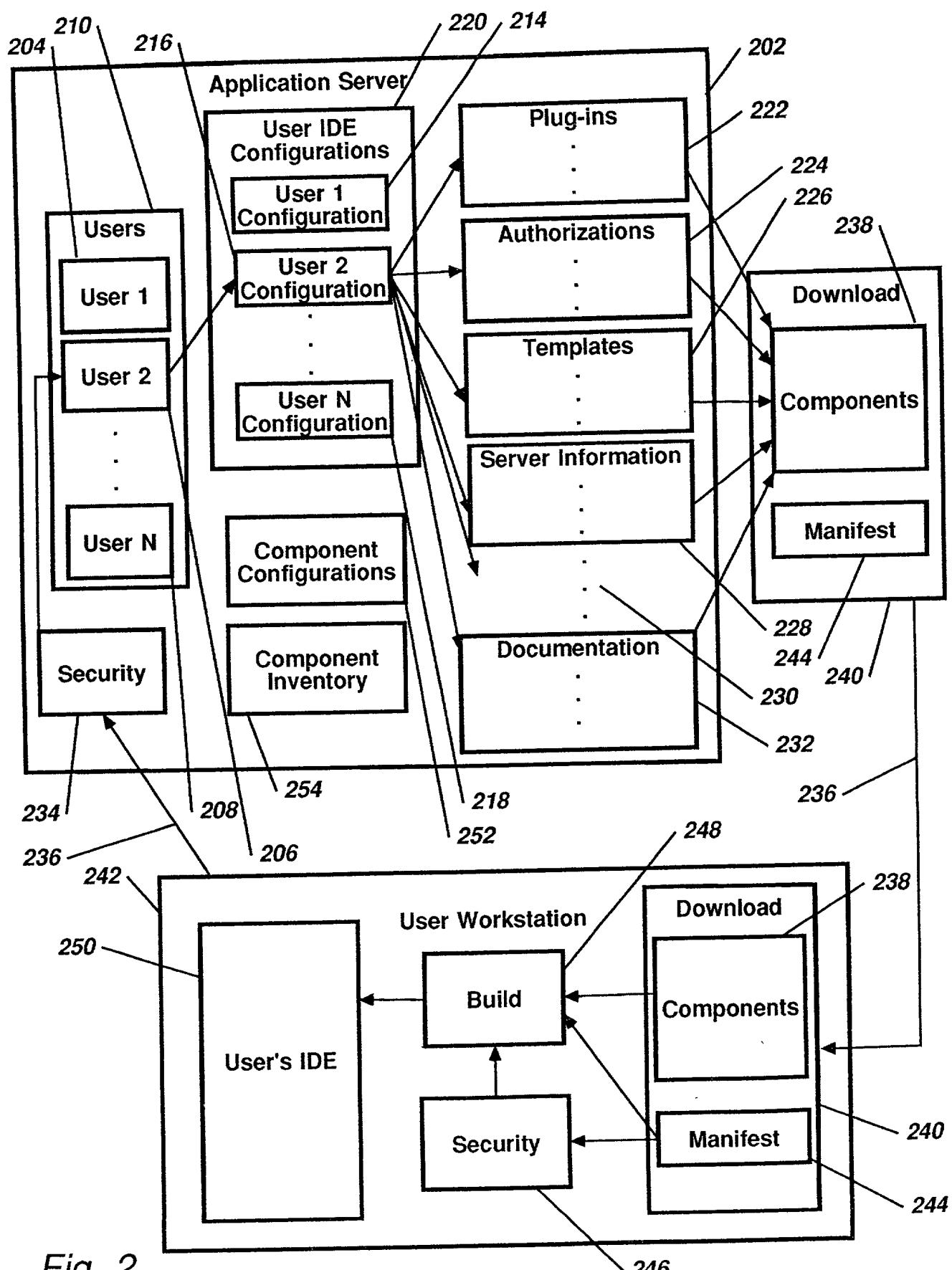


Fig. 2

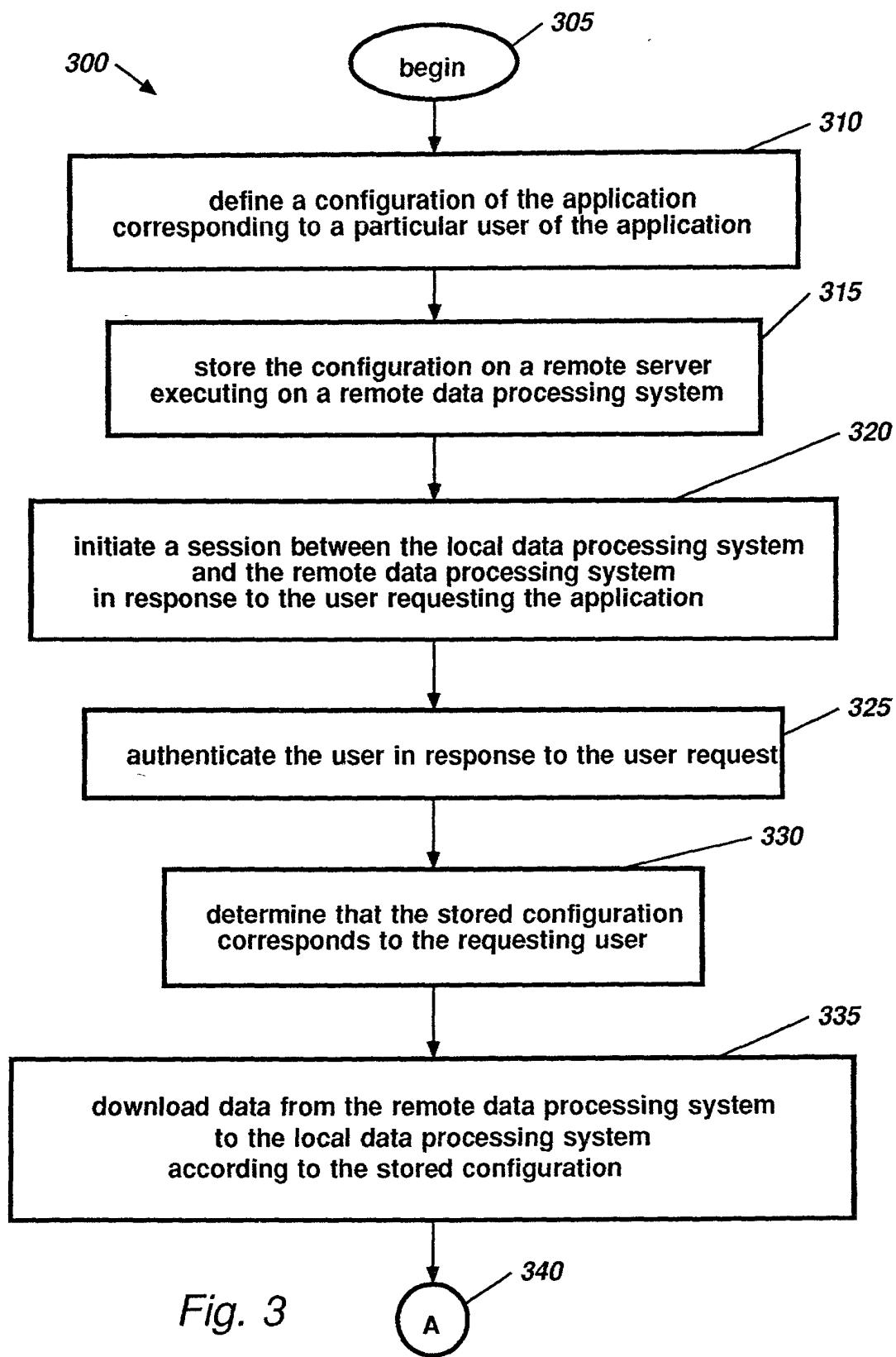
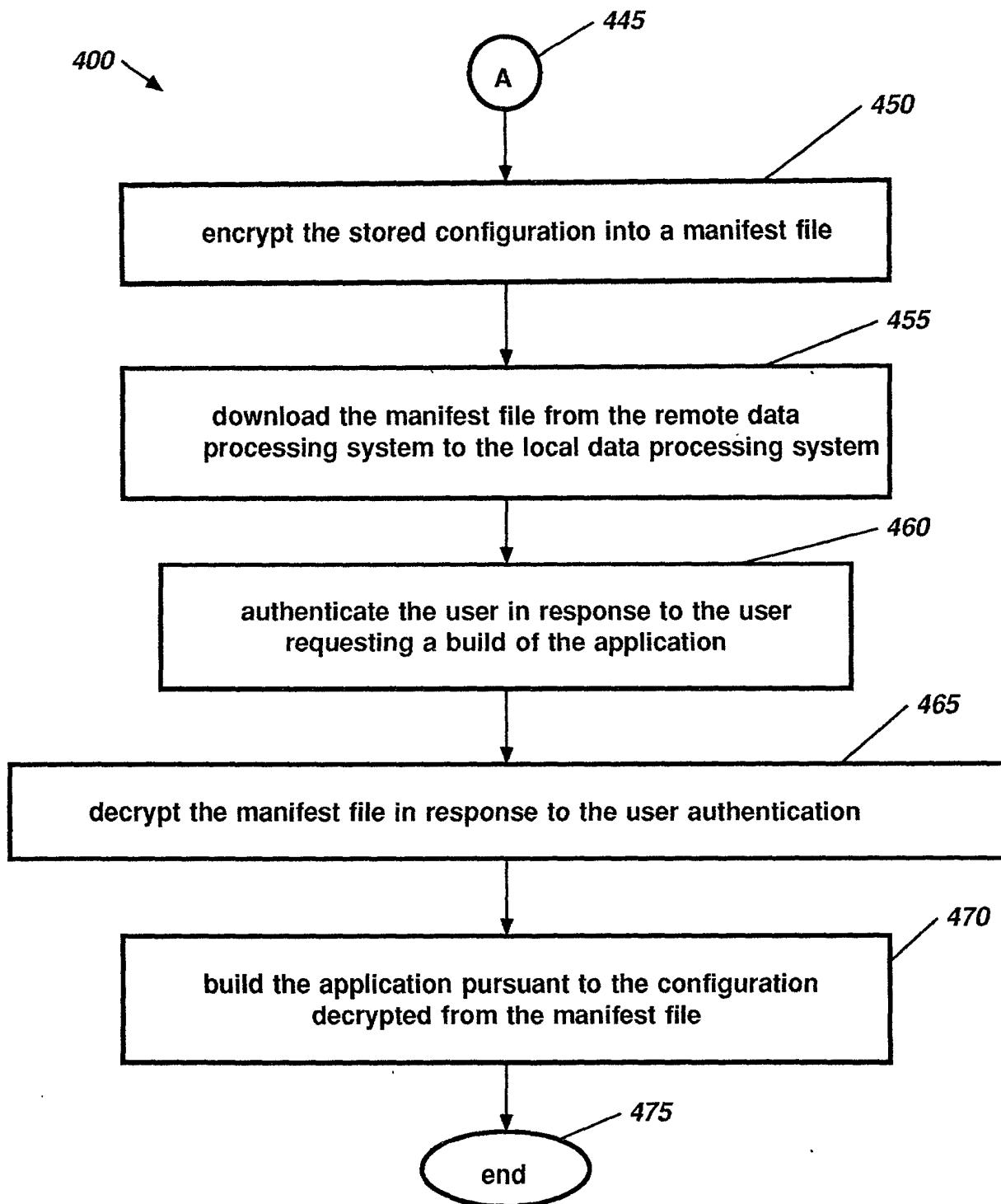


Fig. 3



*Fig. 4*

## DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

DOCKET: STL920000091US1

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name;

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

**METHOD, SYSTEM, COMPUTER PROGRAM PRODUCT, AND ARTICLE OF MANUFACTURE FOR DOWNLOADING A REMOTE COMPUTER PROGRAM ACCORDING TO A STORED CONFIGURATION**

the specification of which (check one)

is attached hereto.  
 was filed on \_\_\_\_\_  
as Application Serial No. \_\_\_\_\_  
and was amended on \_\_\_\_\_ (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119(a)-(d) or Section 365(b) of any foreign application(s) for patent or inventor's certificate, or Section 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below any foreign application for patent or inventor's certificate or PCT International application having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s)	Priority Claimed
<input type="checkbox"/> None (Number)	<input type="checkbox"/> Yes <input type="checkbox"/> No (Country) (Day/Month/Year Filed)

I hereby claim the benefit under Title 35, United States Code, Section 120 of any United States application(s) or Section 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code, Section 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56, which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

None (Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)
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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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**POWER OF ATTORNEY:** As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. (list name and registration number)

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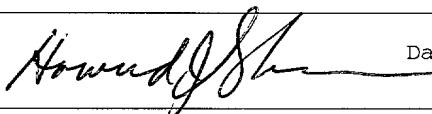
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Inventor's signature:

 Date: 10/12/2000

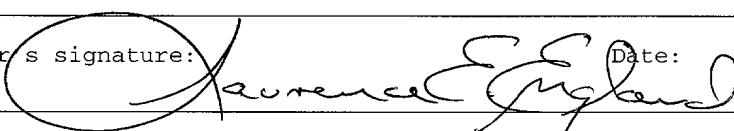
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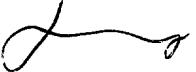
Inventor's signature  Date: 10/12/2000

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